What is claimed is:

1. An automobile cell comprising:

an electric power generating element including a positive electrode having a positive electrode active substance layer, a negative electrode having a negative electrode active substance layer, and a separator interposed between the positive electrode and the negative electrode, the positive electrode, the negative electrode and the separator being stacked in a stack direction to allow the positive electrode and the negative electrode, opposing to the positive electrode via the separator, to define a unit electrode;

a cell outer sheath made from a laminate film compositely composed of polymer and metal and welded to gas-tightly encapsulate the electric power generating element inside the cell outer sheath such that an automobile cell is formed in a flat shape with a thickness defined by the cell outer sheath along the stack direction;

a positive electrode terminal lead electrically conductive with the positive electrode and sandwiched between welded portions, formed by the cell outer sheath that has been welded, and extending to an outside of the cell outer sheath; and

a negative electrode terminal lead electrically conductive with the negative electrode and sandwiched between welded portions, formed by the cell outer sheath that has been welded, and extending to the outside of the cell outer sheath,

wherein the relationship between the thickness of the automobile cell and a sum of a thickness of the positive electrode active substance layer and a thickness of the negative electrode active substance layer, along the stack direction of the unit electrodes, is defined such that a value obtained by dividing the thickness of the automobile cell by the sum of the thickness of the positive electrode active substance layer and the thickness of the negative electrode active substance layer is equal to or less than 80.

2. The automobile cell according to claim 1, wherein the cell outer sheath is rectangular in shape, and a length of one side, other than that of the cell outer sheath from which the positive electrode terminal lead extends to the outside of the cell outer sheath and that of the cell outer

sheath from which the negative electrode terminal lead extends to the outside of the cell outer sheath, is equal to or less than 250 (mm).

3. The automobile cell according to claim 2, wherein a value obtained by dividing a surface area that is equal to or greater than a surface area in which the positive electrode is projected onto an area of the positive electrode active substance layer in the stack direction, and a surface area, in which the negative electrode is projected onto an area of the negative electrode active substance layer in the stack direction, by a cell capacity of the automobile cell is equal to or greater than 30 (cm^2/Ah).

4. The automobile cell according to claim 1, wherein the positive electrode active substance layer is formed on a positive electrode current collector and the negative electrode active substance layer is formed on a negative electrode current collector such that a value obtained by dividing a thickness of the positive electrode terminal lead along the stack direction by a sum of a total thickness of the positive electrode current collector in the automobile cell is equal to or greater than 0.4 and equal to or less than 2.0.

5. The automobile cell according to claim 4, wherein a value obtained by dividing a thickness of the negative electrode terminal lead along the stack direction by a sum of a total thickness of the negative electrode current collector in the automobile cell is equal to or greater than 0.4 and equal to or less than 2.0.

6. The automobile cell according to claim 1, wherein a width of the positive electrode terminal lead is equal to or greater than 40 (%) and equal to or less than 80 (%) of a length of one side of the cell outer sheath from which the positive electrode terminal lead extends to the outside.

7. The automobile cell according to claim 6, wherein a width of the negative electrode terminal lead is equal to or greater than 40 (%) and equal to or less than 80 (%) of a length of one side of the cell outer sheath from which the negative electrode terminal lead extends to the outside.

8. The automobile cell according to claim 7, wherein the positive electrode terminal lead and the negative electrode terminal lead extend to the outside from opposing sides of the cell outer sheath, respectively.

9. The automobile cell according to claim 1, wherein at least one of the positive electrode terminal lead and the negative electrode terminal lead is selected from Ni, Cu, Al, Fe or an alloy of these metals, and Ni, Al, Fe or the alloy of these metals coated with differing elements of Ni, Ag and Au.

10. The automobile cell according to claim 1, wherein at least one of an average thickness of the positive electrode active substance layer and an average thickness of the negative electrode active substance layer is equal to or greater than 20 (μm) and equal to or less than 80 (μm).

11. The automobile cell according to claim 1, wherein the cell outer sheath is made from a pair of the laminate films of which circumferentially peripheral portions are brought into abutting engagement and joined by thermal welding to allow the electric power generating element to be gas-tightly accommodated inside the cell outer sheath such that the positive electrode terminal lead and the negative electrode terminal lead are sandwiched between welded portions, formed by the thermal welding, of the cell outer sheath and extend to the outside.

12. The automobile cell according to claim 1, wherein the cell outer sheath is made from one sheet of the laminate film of which opening portions are brought into abutting engagement and joined by thermal welding to allow the electric power generating element to be gas-tightly accommodated inside the cell outer sheath such that the positive electrode terminal lead and the negative electrode terminal lead are sandwiched between welded portions, formed by the thermal welding, of the cell outer sheath and extend to the outside.

13. The automobile cell according to claim 1, wherein the electric power generating element includes a sheet member, stacked with the positive electrode, the negative electrode and the separator, which is wound to provide the positive electrode, the negative electrode and the separator which are stacked in the stack direction.

14. The automobile cell according to claim 1, wherein at least more than one group of at least more than two of the automobile cells that are connected in parallel or series in combination whereupon the automobile cells are stacked or placed side by side and the positive electrode

terminal leads and the negative electrode terminal leads of the automobile cells are mutually welded.

15. The automobile cell according to claim 14, wherein at least one of the positive electrode terminal leads and/or at least one of the negative electrode terminal leads are welded to an associated one sheet of bus bar.

16. The automobile cell according to claim 14, wherein at least more than two of the automobile cells are compositely connected in series, parallel or combination of series and parallel under a stacked or side-by-side state.

17. The automobile cell according to claim 14, wherein the automobile cells are mounted on a vehicle under a stacked or side-by-side state.

18. A method of manufacturing an automobile cell, the method comprising:

preparing an electric power generating element including a positive electrode having a positive electrode active substance layer, a negative electrode having a negative electrode active substance layer, and a separator interposed between the positive electrode and the negative electrode, the positive electrode, the negative electrode and the separator being stacked in a stack direction to allow the positive electrode and the negative electrode, opposing to the positive electrode via the separator, to define a unit electrode;

placing the electric power generating film in a cell outer sheath made from a laminate film compositely composed of polymer and metal; and

welding the cell outer sheath to gas-tightly encapsulate the electric power generating element inside the cell outer sheath such that a positive electrode terminal lead electrically conductive with the positive electrode is sandwiched between the cell outer sheath to extend to an outside of the cell outer sheath, and a negative electrode terminal lead electrically conductive with the negative electrode is sandwiched between the cell outer sheath to extend to the outside of the cell outer sheath,

wherein the relationship between the thickness of the automobile cell and a sum of a thickness of the positive electrode active substance layer and a thickness of the negative electrode active substance layer,

along the stack direction of the unit electrodes, is defined such that a value obtained by dividing the thickness of the automobile cell by the sum of the thickness of the positive electrode active substance layer and the thickness of the negative electrode active substance layer is equal to or less than 80.